ARCADIS
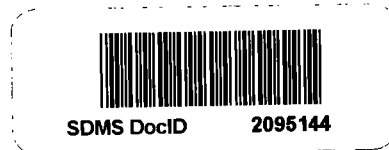
Mitch Cron
USEPA Region III
Hazardous Site Cleanup Division 3HS22
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

Environmental

Subject:
Bally Sub-Slab Sampling Analytical Data Package and Data Validation Memo

ARCADIS Project No.:
NP000597.0004.00002

Date
17 June 2004

Dear Mitch,

On behalf of American Household Inc. (AHI), ARCADIS is submitting the
laboratory analytical data package for the analysis of the sub-slab vapor samples
collected at the former Bally Engineered Structures (BES) facility in March and
April of 2004. In addition, attached for your review is the data validation memo
"Data Validation of Vapor Samples Collected From Bally, Pennsylvania in March
And April 2004". ARCADIS previously submitted the details and results of the
March/April 2004 sub-slab vapor sampling event in the 5 May 2004 summary letter.

Please feel free to contact me if you have any questions or comments.

Contact:
Frank C. Natitus

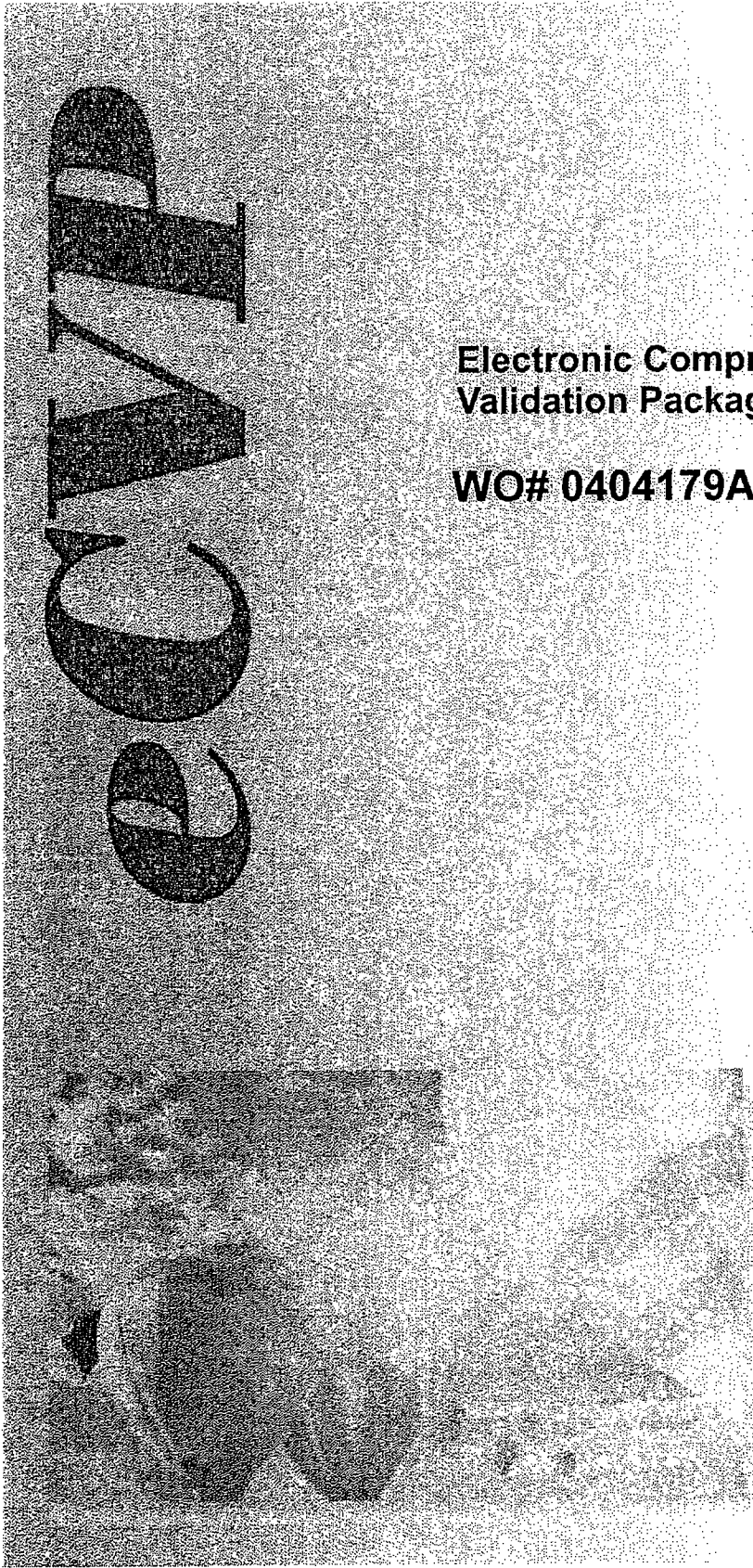Extension:
(267) 685-1833

Sincerely,

ARCADIS G&M, Inc.

Frank C. Natitus, P.E.
Project Manager

Attachments

Copies:
R. Gahagan
C. Gahagan

AR100262

Laboratory Analytical Data Package

Electronic Comprehensive Validation Package

WO# 0404179A

Air Toxics Ltd.

180 Blue Ravine Road Ste. B
Folsom, CA 95630
Phone: 916/985-1000
Fax: 916/985-1020
eMail: atl@airtoxics.com
www.airtoxics.com

AIR TOXICS LTD.

SAMPLE NAME: SV-1
ID#: 0404179A-01A
MODIFIED EPA METHOD TO-15 GC/MS SIM

FileName:	f041307	Date of Collection: 3/31/04
Dil. Factor:	8.93	Date of Analysis: 4/13/04 04:14 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.089	Not Detected	0.23	Not Detected
1,1-Dichloroethene	0.089	120	0.36	500
cis-1,2-Dichloroethene	0.18	0.22	0.72	0.89
Trichloroethene	0.18	24	0.98	130
1,1,1-Trichloroethane	0.18	47	0.99	260
1,1-Dichloroethane	0.18	0.26	0.73	1.1

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	118	70-130
Toluene-d8	105	70-130
4-Bromofluorobenzene	103	70-130

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AIR TOXICS LTD.

SAMPLE NAME: SV-2
ID#: 0404179A-02A
MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name: f041308		Date of Collection: 4/7/04
Dil. Factor: 5.44		Date of Analysis: 4/13/04 05:37 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.054	Not Detected	0.14	Not Detected
1,1-Dichloroethene	0.054	44	0.22	180
cis-1,2-Dichloroethene	0.11	0.90	0.44	3.6
Trichloroethene	0.11	26	0.59	140
1,1,1-Trichloroethane	0.11	100	0.60	560
1,1-Dichloroethane	0.11	0.51	0.45	2.1

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	108	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	102	70-130

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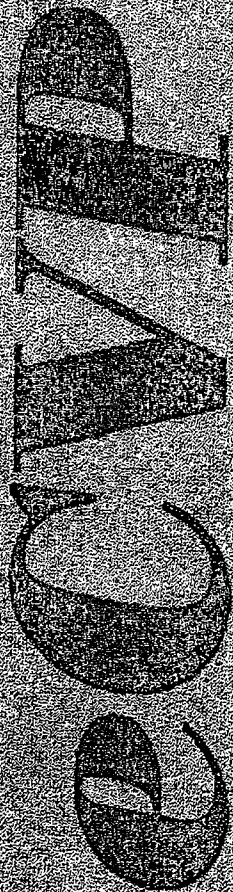
**Electronic Comprehensive
Validation Package**

WO# 0404179B

Air Toxics Ltd.

180 Blue Ravine Road Ste. B
Folsom, CA 95630
Phone: 916/985-1000
Fax: 916/985-1020
eMail: atl@airtoxics.com
www.airtoxics.com

AIR TOXICS LTD.

SAMPLE NAME: SV-3
ID#: 0404179B-03A
MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	i042207	Date of Collection: 3/31/04
Dil. Factor:	26.4	Date of Analysis: 4/22/04 10:45 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	13	Not Detected	34	Not Detected
1,1-Dichloroethene	13	Not Detected	53	Not Detected
1,1-Dichloroethane	13	Not Detected	54	Not Detected
cis-1,2-Dichloroethene	13	Not Detected	53	Not Detected
1,1,1-Trichloroethane	13	Not Detected	73	Not Detected
Trichloroethene	13	2400	72	13000

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
Toluene-d8	99	70-130
1,2-Dichloroethane-d4	103	70-130
4-Bromofluorobenzene	99	70-130

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AR100268

AIR TOXICS LTD.

SAMPLE NAME: SV-4
ID#: 0404179B-04A
MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	i042208	Date of Collection: 3/31/04
Dil. Factor:	10.7	Date of Analysis: 4/22/04 11:26 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	5.4	Not Detected	14	Not Detected
1,1-Dichloroethene	5.4	Not Detected	22	Not Detected
1,1-Dichloroethane	5.4	Not Detected	22	Not Detected
cis-1,2-Dichloroethene	5.4	17	22	70
1,1,1-Trichloroethane	5.4	12	30	67
Trichloroethene	5.4	1100	29	6100

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
Toluene-d8	97	70-130
1,2-Dichloroethane-d4	101	70-130
4-Bromofluorobenzene	98	70-130

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Data Validation Report

DATA VALIDATION OF
VAPOR SAMPLES
COLLECTED FROM BALLY,
PENNSYLVANIA IN MARCH
AND APRIL 2004

APRIL 30, 2004

REVIEWED BY DONNA M. BROWN

ARCADIS

Infrastructure, buildings, environment, communications

ARCADIS

Appendices

    A   Glossary of Data Qualifiers for all SDGs, Not Applicable

    B   Data Summary Forms by SDG, Not Applicable

    C   Laboratory Report Results by SDG

    D   Laboratory Report TICs, Not Analyzed

    E   Support Documents by SDG, Not Applicable

Data Validation Narrative for SDG 0404179A

Overview for SDG 0404179A

The samples were sent to Air Toxic Ltd, located in Folsom, California for analysis. The samples were analyzed for selected volatile organic compounds (VOCs) by modified United States Environmental Protection Agency (USEPA) method TO-15 GC/MS SIM.

Two samples (SV-1 and SV-2) were collected on March 31, and April 7, 2004, respectively.

Summary for SDG 0404179A

The QC presented in SDG 0404179A is acceptable with no qualification of the data necessary.

Major Problems for SDG 0404179A

None.

Minor Problems for SDG 0404179A

None.

Notes for SDG 0404179A

Data were analyzed within holding time requirements. An initial calibration and continuing calibration were analyzed and were within QC limits. The surrogate spikes and internal standard were within QC limits. The laboratory control samples and instrument performance checks were within QC limits. Target compounds were not detected in the laboratory blank.

Report Content Statement for SDG 0404179A

Validation of the VOCs data was performed following guidance from the Region III Modifications to National Functional Guideline for Organic Data Review Multi-Media, Multi-Concentration (September 1994) and Innovative Approaches to Data Validation (June 1995) Level M3.

Data Validation Narrative for SDG 0404179B

Overview for SDG 0404179B

The samples were sent to Air Toxic Ltd, located in Folsom, California for analysis.
The samples were analyzed for selected volatile organic compounds (VOCs) by
modified United States Environmental Protection Agency (USEPA) method TO-15
GC/MS full scan.

Two samples (SV-3 and SV-4) were collected on March 31, 2004.

Summary for SDG 0404179B

The QC presented in SDG 0404179B is acceptable with no qualification of the data
necessary.

Major Problems for SDG 0404179B

None.

Minor Problems for SDG 0404179B

None.

Notes for SDG 0404179B

Data were analyzed within holding time requirements. An initial calibration and
continuing calibration were analyzed and were within QC limits. The surrogate spikes
and internal standard were within QC limits. The laboratory control samples and
instrument performance checks were within QC limits. Target compounds were not
detected in the laboratory blank.

Report Content Statement for SDG 0404179B

Validation of the VOCs data was performed following guidance from the Region III
Modifications to National Functional Guideline for Organic Data Review Multi-

AR100274

Media, Multi-Concentration (September 1994) and Innovative Approaches to Data Validation (June 1995) Level M3.

ARCADIS

Appendix A

Glossary of Data Qualifiers
for all SDGs,
Not Applicable

ARCADIS

Appendix B

Data Summary Forms by
SDG, Not Applicable

ARCADIS

Appendix C

Laboratory Report Results
by SDG

ARCADIS

Appendix D

Laboratory Report TICs, Not
Analyzed

ARCADIS

Appendix E

Support Documentation by
SDG, Not Applicable